Hanson
HEIDELBERGCEMENT Group

Structherm
Greener | Warmer | Stronger

Richmond Flats (Harold Wilson Court)

Huddersfield, West Yorkshire

Sector: Social Housing
High Rise
Refurbishment


Before

Client:
Kirklees Council /
Kirklees Neighbourhood Housing

Building Type:
Brick Cavity

Project Size:
11 Storey 1,900m²

Product:
- External Wall Insulation & Silicone Render Finish
- Wonderwall Brick Slip Cladding to Ground Floor


After refurbishment - renamed Harold Wilson Court.

Project Background:

Kirklees Council has three similar high rise tower blocks within their stock, Richmond, Ibbotson and Lonsbrough flats, which are referred to locally as Southgate Flats. Each block has eleven storeys and they were purpose built between 1962 and 1964 to provide social housing for the council.

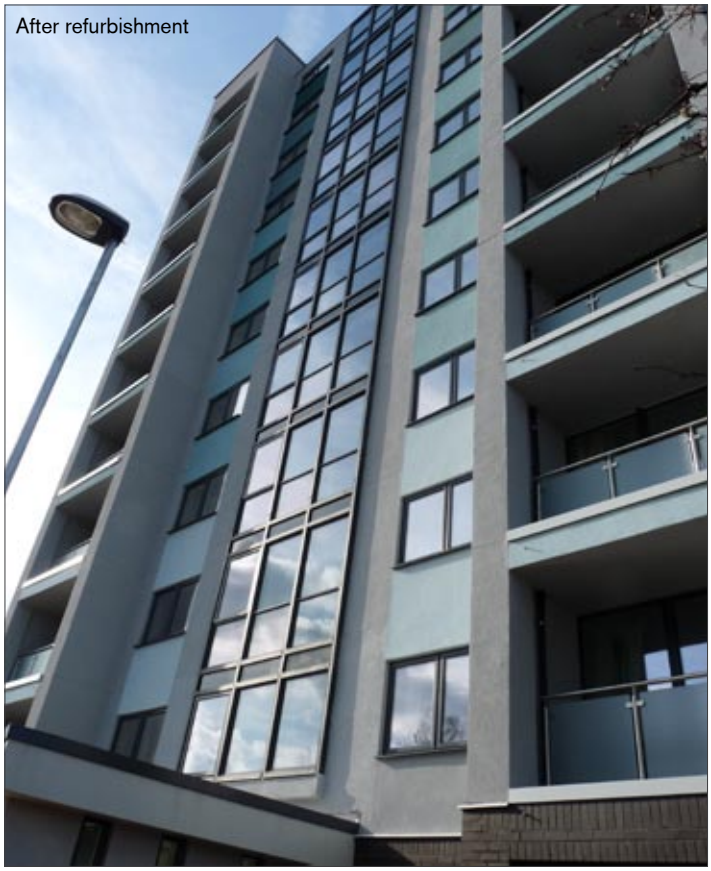
Lonsbrough and Ibbotson flats are set to be demolished as part of a huge project to create a new Tesco superstore on the site of Huddersfield Sports Centre. Richmond flats which are situated on the opposite side of the road, however, were to be retained and renovated as detailed in the council's five-year Capital Investment Plan.

The flats are constructed of reinforced concrete floors, roof, stairs and landings with loading bearing internal masonry walls and cavity external brickwork. All the flats have a recessed balcony that feature on each corner of the building.

Client Requirements:

Kirklees Neighbourhood Housing, who were managing the project, wanted to transform the block using a £3.7m fund from three sources. £2.1m had been earmarked from the Housing Revenue Account, which is funded by council house tenants' rent, a further £1.3m from the Public Sector Housing section of the Capital Plan and The European Regional Development Fund contributed £230,000.

The refurbishment programme was to include new triple glazing, a new lobby and security system, balcony enclosures to increase the floor space of each flat, solar panels installed on the roof, new kitchens and bathrooms as well as External Wall Insulation (EWI). The EWI would improve the thermal performance of the block and therefore cut fuel bills for residents whilst also making the block water tight, eliminating condensation problems within the flats and improving the external appearance of the block.


After refurbishment

Design Solution:

Structherm's NSC2a Thin Coat System for High Rise Applications was specified by the main contractor and architect as the External Wall Insulation system to be used. The system is backed by full British Board of Agrèment (BBA) certification, number 96/3243 Product Sheet 3 and has been used extensively on high rise projects all over the UK.

The system consisted of a layer of high performance, 100mm thick, Phenolic insulation boards fixed to the building using one central fixing per board. A layer of high polymer modified basecoat render incorporating lightweight aggregates and reinforcing polyester fibres, was then applied to a thickness of 2-3mm.

Glass fibre reinforcing mesh in roll form, was embedded into the first layer of basecoat render. Further specially selected fixings were then installed through the mesh, basecoat and insulation boards at the rate of 6-8 per m^2 including one fire rated fixing. In addition to the initial 2-3mm skim coat, a second layer of basecoat render was then applied over the mesh to a final thickness of 4-6mm.

To complete the system a contemporary high performance Silicone finish was applied in a striking design using grey to the main elevations and varying gradations of green to areas beneath windows. The synthetic Silicone finish has a wide range of benefits over traditional renders such as excellent water vapour permeability, resistance to dirt pick up and can help prevent algae and fungus growth. These characteristics are ideal for high rise applications where maintenance can be difficult due to the heights involved.

On the ground floor Structherm's Wonderwall, an insulated real brick slip cladding system, was chosen because of its robustness and impact resistant properties. The system comprised of a rigid 25mm thick Phenolic insulation panel pre-bonded to a brickwork coordinating carrier sheet and an extra layer of 80mm Phenolic insulation behind it. Anthracite brick slips were then fixed to the carrier sheet using a purpose made adhesive and pointed with a complementary coloured pointing mortar.

Results:

- Thermal performance has improved greatly with the U value of the walls dropping from 0.58W/m^2K to 0.15W/m^2K.
- The carbon footprint has reduced as it now requires less fuel to heat each flat to a comfortable temperature.
- The fresh, contemporary design of the building along with enclosed balconies, new windows and entrance upgrades has transformed the appearance of the block into a modern and attractive building which has also been renamed – in honour of Huddersfield-born former Prime Minister Harold Wilson as Harold Wilson Court.

After refurbishment

Structherm Ltd, Bent Ley Road, Meltham, Holmfirth, West Yorkshire, HD9 4AP
t: 01484 850098 **f:** 01484 851388 **e:** info@structherm.co.uk www.structherm.co.uk